Bridelia micrantha (Hochst.) Baill.

Euphorbiaceae

LOCAL NAMES
Afrikaans (bruinstinkhout,mitserie); Amharic (yeneber tifer); Bemba (mutantansange,mushiminwanongo,musabayembe); English (bridelia,coast goldleaf); Igbo (ogaofia); Luganda (kasangati,katazamiti); Lunda (mukunku,mumbuza); Nyanja (mlebezi,mnazi,msongamino); Swahili (mkarati,mkarakala,mwiza,mtutu); Tongan (munyansa,munyanya,mushiwe); Xhosa (umHlahla-makwaba); Yoruba (asha,ida odan); Zulu (isiHlalamangewibi,umHlahle,umHlalamagwababa,umShonge)

BOTANIC DESCRIPTION
Bridelia micrantha is a semi-deciduous to deciduous tree up to 20 m tall with a dense rounded crown and tall, bare stem; bark on young branches grey-brown and smooth, on older branches and stems dark brown and rough, cracking into squares; branches often spiny; slash thin, fibrous, brown to dark red.

Leaves alternate, simple; subcoriaceous, deep glossy green above, paler and minutely appressed-puberulous beneath (hairs sometimes visible only with a lens); stipulate, stipules lanceolate-acuminate, 5-7 mm long; blade elliptic, oblong-elliptic or obovate, 4.5-18 x 1.5-7 cm, apex subobtuse to acuminate; base generally rounded; margins entire or slightly wavy; lateral nerves in 8-14 pairs, barely visible and reaching the margins without branching; petiole 3-10 mm long.

Inflorescence with flowers in axillary clusters containing male and female flowers; male flowers on pedicles 1-2 mm long; sepals yellow-green, triangular, 1.5-2 mm long; petals obovate, shorter than the sepals; stamens 5; female flowers subsessile, disk enveloping the ovary; styles 2, forked.

Fruit black, subglobose to ellipsoid drupe about 8 mm long, 5-8 mm in diameter, each with 1 seed.

'Bridelia' is named after Prof. S.E. de Bridel (1761-1828); 'micrantha' means 'small-flowered'.

BIOLOGY
Male and female flowers are separate but on same tree; female flowers sessile. In southern Africa, flowering occurs from September to December and fruiting from January to April. The seeds are spread by birds, which feed on them and distribute them in their faeces.

Bridelia micrantha slash (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)

Bridelia micrantha flower (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)

Bridelia micrantha fruits (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)

ECOLOGY
B. micrantha occurs in savannah and secondary forest, in swamp forest, along forest edges, in riverine woodland and in gallery forest. It does well in a wide variety of climates. It is naturally distributed from the Sudan in the north to the eastern Cape in South Africa. It can withstand light frost but is not drought resistant.

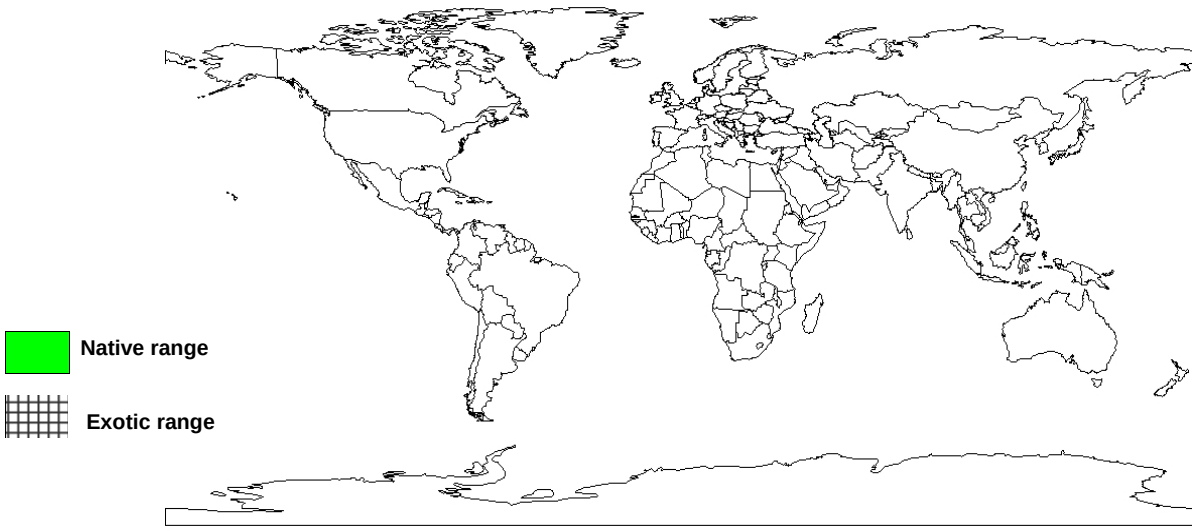
BIOPHYSICAL LIMITS
Altitude: 300-2200 m, Mean annual temperature: 18-28 deg. C, Mean annual rainfall: 800-2500 mm

Soil type: Grows on a variety of soils, from sandy to regular clay loams.

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Burundi, Cameroon, Cote d'Ivoire, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Kenya, Liberia, Malawi, Mali, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Uganda, Zambia, Zanzibar, Zimbabwe

Exotic: Reunion



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS
Food: The fruits are sweet and edible when ripe and taste slightly like currants.

Fodder: In East and West Africa, B. micrantha is the host for the wild silkworm, Anaphe infracta, and has been cultivated for this purpose. The leaves are used for fodder. Animals eating the leaves are nyala, bushbuck and grey duiker. The only animal recorded as eating both leaves and bark is the black rhino.

Fuel: The wood makes excellent firewood and charcoal.

Timber: The sapwood is yellowish and the heartwood reddish-brown to dark brown and is hard and moderately heavy (air-dry 670 kg/m^3). The wood is durable, fairly hard and termite resistant. Poles from it are used for building huts and granaries, and are sometimes cut for beams or fence posts. The wood can be used for parquet floors, furniture, panelling, tool handles, boats, bows, carpentry, and most general joinery work. The oiled wood resembles black stinkwood.

Gum or resin: The resin is used for sealing cracks in doors, baskets, pottery and winnowing trays.

Tannin or dyestuff: A red dye is extracted by boiling the bark, and a black dye is obtained from the leaves, twigs and wood. The fruit also contains a dye.

Medicine: A bark decoction is taken as a remedy for stomach-ache and tapeworm. The bark is also boiled to make a soup for treating diarrhoea in children, or is mixed with milk and drunk as a tonic. A decoction of roots is drunk to cure aching joints. The leaf sap is used as an application to sore eyes and, in a decoction with a number of other plants, for the treatment of conjunctivitis. The root is used as a remedy for severe epigastric pain and is applied to the scalp to relieve headache. A decoction of the root is drunk as a purgative, an anthelmintic or an antidote for poison, as it causes vomiting or diarrhoea that gets rid of the poison. An infusion made from the root is taken orally for coughs. The powdered bark is applied to burns to speed healing.

Other products: The plant is said to contain saponin. Edible fruits are sometimes used as fish bait.

SERVICES
Erosion control: As B. micrantha roots are extensive and bind the soil effectively, they can be used along eroded drainage lines and streams where the natural vegetation has been removed. The trees can be planted in areas that flood during rainy seasons.

Shade or shelter: B. micrantha makes an excellent shade tree, not only in the garden but also on the farm, after only 3 years, forming a neatly shaped crown. It is grown in banana and coffee plantations for its shade. The trees form a canopy under which various other plants germinate and grow, establishing new riverine vegetation.

Soil improver: The leaves are used for mulching.

Ornamental: B. micrantha can be effectively used as a background plant in the garden, adding a splash of colour with its yellow, orange and purple leaves.

Intercropping: Commonly intercropped and managed by small-scale farmers.

TREE MANAGEMENT
B. micrantha grows fast on good sites; it is one of the fastest growing indigenous trees of South Africa, with a growth rate of up to 2 m/year. Pollarding and coppicing are practised. Coppice shoots are produced after the trees are felled. Root suckers are produced if the roots are wounded, for example by trampling animals or during cultivation. Most of the seedlings and saplings succumb to competition with other weed plants; thus, crop refining could help in promoting natural regeneration. Ripe fruits are very popular with many of the fruit-eating birds, making B. micrantha a must for the bird garden.

Farmers in the warm, high-rainfall areas can consider planting trees in a plantation as a long-term project for hardwood production. Trees can be cut when they are 30 years old. B. micrantha has an aggressive root system and cannot be planted close to buildings or paved areas.

GERMPLASM MANAGEMENT
B. micrantha is a prolific seeder with 1900-19 500 seeds/kg. The seed has short viability (oily seed); it does not store.

PESTS AND DISEASES
Larvae of the butterflies giant charaxes (Charaxes casto flavifaciatus) and Morant’s orange (Parasmodes morantii) live on B. micrantha.

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SUGGESTED CITATION

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